

from Preliminary Amendment filed October 3, 2003

Amendments to the Claims

Please cancel Claims 2-53 without prejudice to or disclaimer of the subject matter recited therein.

1. (Original) An output apparatus comprising:
 - a cartridge containing a recording material;
 - detection means for detecting the remaining amount of the recording material in said cartridge; and
 - control means for storing the cumulative consumed amount of the recording material in a non-volatile memory unit, thereby determining the remaining amount of the recording material.

Claims 2-53 (cancelled)

from Supplemental Preliminary Amendment filed December 5, 2003

Amendments to the Claims

Please cancel Claim 1 without prejudice to or disclaimer of the subject matter recited therein.

Please add new Claims 54-73 to read as follows.

Claims 1-53 (cancelled)

54. (New) A printing apparatus using a cartridge that contains a recording material and is provided with a non-volatile memory unit, said printing apparatus comprising:

warning means for providing a warning in response to a remaining amount of the recording material becoming low;

control means for controlling the non-volatile memory unit to store time information on a year and a month on which the cartridge was first used; and

calculation means for calculating a lifetime of the cartridge based on the time information stored in the non-volatile memory unit,

wherein said warning means provides the warning based on the lifetime of the cartridge calculated by said calculation means.

55. (New) An apparatus according to Claim 54, further comprising display control means for controlling a host computer in communication with said printing apparatus to display information on an address of a sales agent stored in the non-volatile memory unit.

56. (New) An apparatus according to Claim 54, wherein second time information on a year and a month on which the cartridge was manufactured is also stored in the non-volatile memory unit, and said warning means provides the warning based on the lifetime of the cartridge calculated based on the second time information.

57. (New) An apparatus according to Claim 54, wherein said warning means provides the warning on a display screen of a monitor connected to a host computer.

58. (New) An apparatus according to Claim 54, wherein said warning means provides the warning on a display unit of said apparatus.

59. (New) A printing apparatus using a cartridge that contains a recording material and is provided with a non-volatile memory unit, said printing apparatus comprising:

warning means for providing a warning in response to a remaining amount of the recording material becoming low;

control means for controlling the non-volatile memory unit to store time information on a time on which the cartridge was first used; and

calculation means for calculating a lifetime of the cartridge based on the time information stored in the non-volatile memory unit,

wherein said warning means provides the warning based on the lifetime of the cartridge calculated by said calculation means.

60. (New) An apparatus according to Claim 59, wherein said warning means provides the warning on a display screen of a monitor connected to a host computer.

61. (New) An apparatus according to Claim 59, wherein said warning means provides the warning on a display unit of said apparatus.

62. (New) A cartridge mounted in a printing apparatus, wherein the printing apparatus comprises:

warning means for providing a warning in response to a remaining amount of a recording material contained in said cartridge becoming low;

control means for controlling said cartridge to store time information on a year and a month on which said cartridge was first mounted in the printing apparatus; and

calculation means for calculating a lifetime of said cartridge based on the time information stored in said cartridge,

wherein the warning means provides the warning based on the lifetime of said cartridge calculated by the calculation means, and

wherein said cartridge comprises:

containing means for containing the recording material; and

non-volatile memory means for storing the time information.

63. (New) A cartridge according to Claim 62, wherein the warning means provides the warning on a display screen of a monitor connected to a host computer.

64. (New) A cartridge according to Claim 62, wherein the warning means provides the warning on a display unit of the printing apparatus.

65. (New) A memory device provided in a cartridge that contains a recording material and is mounted in a printing apparatus, wherein the printing apparatus comprises:

warning means for providing a warning in response to a remaining amount of the recording material becoming low;

control means for controlling said memory device to store time information on a year and a month on which the cartridge was first mounted in the printing apparatus; and

calculation means for calculating a lifetime of the cartridge based on the time information stored in said memory device,

wherein the warning means provides the warning based on the lifetime of the cartridge calculated by the calculation means, and

wherein said memory device comprises:

non-volatile memory means for storing the time information; and

accepting means for accepting a request for access to said non-volatile memory means from the control means.

66. (New) A memory device according to Claim 65, wherein the warning means provides the warning on a display screen of a monitor connected to a host computer.

67. (New) A memory device according to Claim 65, wherein the warning means provides the warning on a display unit of the printing apparatus.

68. (New) A cartridge mounted in a printing apparatus, wherein the printing apparatus comprises:

warning means for providing a warning in response to a remaining amount of a recording material contained in said cartridge becoming low;

control means for controlling said cartridge to store time information on a time on which said cartridge was first mounted in the printing apparatus; and

calculation means for calculating a lifetime of said cartridge based on the time information stored in said cartridge,

wherein the warning means provides the warning based on the lifetime of said cartridge calculated by the calculation means, and

wherein said cartridge comprises:

containing means for containing the recording material; and

non-volatile memory means for storing the time information.

69. (New) A cartridge according to Claim 68, wherein the warning means provides the warning on a display screen of a monitor connected to a host computer.

70. (New) A cartridge according to Claim 68, wherein the warning means provides the warning on a display unit of the printing apparatus.

71. (New) A memory device provided in a cartridge that contains a recording material and is mounted in a printing apparatus, wherein the printing apparatus comprises:

warning means for providing a warning in response to a remaining amount of the recording material becoming low;

control means for controlling said memory device to store time information on a time on which the cartridge was first mounted in the printing apparatus; and

calculation means for calculating a lifetime of the cartridge based on the time information stored in said memory device,

wherein the warning means provides the warning based on the lifetime of the cartridge calculated by the calculation means, and

wherein said memory device comprises:

non-volatile memory means for storing the time information; and

accepting means for accepting a request for access to said non-volatile memory means from the control means.

72. (New) A memory device according to Claim 71, wherein the warning means provides the warning on a display screen of a monitor connected to a host computer.

73. (New) A memory device according to Claim 71, wherein the warning means provides the warning on a display unit of the printing apparatus.